

# Steffen Bass

## List of Publications by Year in descending order

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147  
papers

9,143  
citations

71102

41  
h-index

38395

95  
g-index

152  
all docs

152  
docs citations

152  
times ranked

5018  
citing authors

#	ARTICLE	IF	CITATIONS
1	Microscopic models for ultrarelativistic heavy ion collisions. Progress in Particle and Nuclear Physics, 1998, 41, 255-369.	14.4	1,575
2	Relativistic hadron-hadron collisions in the ultra-relativistic quantum molecular dynamics model. Journal of Physics G: Nuclear and Particle Physics, 1999, 25, 1859-1896.	3.6	1,287
3	Hadronization in Heavy-Ion Collisions: Recombination and Fragmentation of Partons. Physical Review Letters, 2003, 90, 202303.	7.8	592
4	200 $A \text{ GeV Au-Au Collisions}$ Serve a Nearly Perfect Quark-Gluon Liquid. Physical Review Letters, 2011, 106, 192301.	7.8	380
5	The iEBE-VISHNU code package for relativistic heavy-ion collisions. Computer Physics Communications, 2016, 199, 61-85.	7.5	302
6	Space-time evolution of bulk QCD matter. Physical Review C, 2007, 75, .	2.9	245
7	Bayesian estimation of the specific shear and bulk viscosity of quark-gluon plasma. Nature Physics, 2019, 15, 1113-1117.	16.7	230
8	Signatures of quark-gluon plasma formation in high energy heavy-ion collisions: a critical review. Journal of Physics G: Nuclear and Particle Physics, 1999, 25, R1-R57.	3.6	218
9	Triangular flow in event-by-event local hydrodynamics in Au collisions at $\sqrt{s_{NN}} = 200$ GeV. Physical Review Letters, 2009, 102, 172302.	2.9	182
10	Shear-Viscosity to Entropy-Density Ratio of a Relativistic Hadron Gas. Physical Review Letters, 2009, 102, 172302.	7.8	176
11	Heavy-quark dynamics and hadronization in ultrarelativistic heavy-ion collisions: Collisional versus radiative energy loss. Physical Review C, 2013, 88, .	2.9	173
12	Translation of collision geometry fluctuations into momentum anisotropies in relativistic heavy-ion collisions. Physical Review C, 2010, 82, .	2.9	170
13	Clocking Hadronization in Relativistic Heavy-Ion Collisions with Balance Functions. Physical Review Letters, 2000, 85, 2689-2692.	7.8	163
14	Systematic comparison of jet energy-loss schemes in a realistic hydrodynamic medium. Physical Review C, 2009, 79, .	2.9	158
15	Strangeness dynamics and transverse pressure in relativistic nucleus-nucleus collisions. Physical Review C, 2004, 69, .	2.9	152
16	Viscous QCD matter in a hybrid hydrodynamic+Boltzmann approach. Physical Review C, 2011, 83, .	2.9	134
17	Anomalous Viscosity of an Expanding Quark-Gluon Plasma. Physical Review Letters, 2006, 96, 252301.	7.8	118
18	Azimuthal correlations of pions in relativistic heavy-ion collisions at 1 GeV/nucleon. Physical Review C, 1995, 51, 3343-3356.	2.9	112

#	ARTICLE	IF	CITATIONS
19	Elliptic flow in Au+Au collisions at RHIC. Physical Review C, 2001, 63, 054902. $\sqrt{s} = 130 \text{ GeV}$ Au collisions at RHIC. Physical Review C, 2001, 63, 054902.	2.9	109
20	Hadron spectra and elliptic flow for Au+Au collisions at RHIC. Physical Review C, 2001, 63, 054902. $\sqrt{s} = 130 \text{ GeV}$ GeV Au collisions at RHIC. Physical Review C, 2001, 63, 054902.	2.9	105
21	from viscous hydrodynamics coupled to a Boltzmann cascade. Physical Review C, 2011, 83, . Pion Interferometry at RHIC: Probing a Thermalized Quark-Gluon Plasma?. Physical Review Letters, 2001, 86, 3981-3984.	7.8	101
22	Equation of state, spectra, and composition of hot and dense infinite hadronic matter in a microscopic transport model. Physical Review C, 1998, 58, 1727-1733.	2.9	91
23	Anomalous Transport Processes in Anisotropically Expanding Quark-Gluon Plasmas. Progress of Theoretical Physics, 2006, 116, 725-755.	2.0	79
24	Intermediate mass excess of dilepton production in heavy ion collisions at relativistic energies. Physical Review C, 1998, 58, 447-456.	2.9	73
25	Elliptic and triangular flow of heavy flavor in heavy-ion collisions. Physical Review C, 2015, 91, .	2.9	73
26	Parton rescattering and screening in Au+Au collisions at RHIC. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2003, 551, 277-283.	4.1	72
27	Longitudinal Broadening of Quenched Jets in Turbulent Color Fields. Physical Review Letters, 2007, 99, 042301.	7.8	72
28	Strangeness enhancement in heavy ion collisions – evidence for quark-gluon matter?. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 471, 89-96.	4.1	69
29	Disappearance of flow. Physical Review C, 1995, 51, 3320-3325.	2.9	66
30	Spectra and elliptic flow for identified hadrons in Au+Au collisions at RHIC. Physical Review C, 2014, 89, .	2.9	63
31	Thermalization of charm quarks in infinite and finite quark-gluon plasma matter. Physical Review C, 2011, 84, .	2.9	61
32	Out-of-plane pion emission in relativistic heavy-ion collisions: Spectroscopy of $\rho$ resonance matter. Physical Review Letters, 1993, 71, 1144-1147.	7.8	54
33	Is collective pion flow anticorrelated to nucleon flow?. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 302, 381-385.	4.1	52
34	Local thermal and chemical equilibration and the equation of state in relativistic heavy ion collisions. Journal of Physics G: Nuclear and Particle Physics, 1999, 25, 351-361.	3.6	52
35	Correlated Emission of Hadrons from Recombination of Correlated Partons. Physical Review Letters, 2005, 94, 122301.	7.8	52
36	Jet quenching in a three-dimensional hydrodynamic medium. Physical Review C, 2007, 75, .	2.9	52

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37	Elliptic flow of multi-strange particles: fragmentation, recombination and hydrodynamics. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 583, 73-78.	4.1	49
38	Constraining the initial state granularity with bulk observables in Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV. Journal of Physics G: Nuclear and Particle Physics, 2011, 38, 045102.	3.6	45
39	Highptpions as probes of the dense phase of relativistic heavy ion collisions. Physical Review C, 1994, 50, 2167-2172.	2.9	42
40	Elliptic flow of resonances in relativistic heavy ion collisions: Probing final state interactions and the structure of resonances. Physical Review C, 2004, 69, .	2.9	42
41	The QGP shear viscosityâ€“elusive goal or just around the corner?. Journal of Physics G: Nuclear and Particle Physics, 2011, 38, 124045.	3.6	42
42	Neural networks for impact parameter determination. Physical Review C, 1996, 53, 2358-2363.	2.9	41
43	Jet modification in three dimensional fluid dynamics at next-to-leading twist. Physical Review C, 2007, 76, .	2.9	37
44	Microscopic calculations of stopping, flow and electromagnetic radiation from 160AMeV to 160AGeV. Nuclear Physics A, 1996, 610, 116-123.	1.5	34
45	Transverse Velocity Dependence of the Proton-Antiproton Ratio as a Signature of the QCD Critical Point. Physical Review Letters, 2008, 101, 122302.	7.8	34
46	Are We Close to an Equilibrated Quark-Gluon Plasma? Nonequilibrium Analysis of Particle Production in Ultrarelativistic Heavy Ion Collisions. Physical Review Letters, 1998, 81, 4092-4095.	7.8	33
47	Longitudinal correlation of the triangular flow event plane in a hybrid approach with hadron and parton cascade initial conditions. Physical Review C, 2011, 84, .	2.9	33
48	Probing $\hat{\eta}$ resonance production in Au+Au collisions at 1 GeV/nucleon. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1994, 335, 289-294.	4.1	32
49	Critical review of quark gluon plasma signatures. Progress in Particle and Nuclear Physics, 1999, 42, 279-293.	14.4	29
50	Overpopulation of $\hat{\eta}$ in ppCollisions: A Way to Distinguish Statistical Hadronization from String Dynamics. Physical Review Letters, 2002, 88, 202501.	7.8	29
51	Thermal recombination: Beyond the valence quark approximation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 618, 77-83.	4.1	29
52	Neural networks for impact parameter determination. Journal of Physics G: Nuclear and Particle Physics, 1994, 20, L21-L26.	3.6	28
53	A systematic study of the sensitivity of triangular flow to the initial state fluctuations in relativistic heavy-ion collisions. Journal of Physics G: Nuclear and Particle Physics, 2012, 39, 055102.	3.6	26
54	Collisional vs. Radiative Energy Loss of Heavy Quark in a Hot and Dense Nuclear Matter. Nuclear Physics A, 2013, 904-905, 653c-656c.	1.5	26

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55	Photon Interferometry of Au+Au Collisions at the BNL Relativistic Heavy-Ion Collider. Physical Review Letters, 2004, 93, 162301.	7.8	25
56	Radiative jet energy loss in a three-dimensional hydrodynamical medium and high- $p_T$ asymmetry of $\pi^0$ at mid and forward rapidity in. Physical Review C, 2007, 76, .	2.9	25
57	3-D hydro + cascade model at RHIC. Nuclear Physics A, 2006, 774, 873-876.	1.5	24
58	Model and parameter dependence of heavy quark energy loss in a hot and dense medium. Journal of Physics G: Nuclear and Particle Physics, 2013, 40, 085103.	3.6	24
59	Possible resolutions of the D-puzzle. Physical Review C, 2005, 71, .	2.9	23
60	Reaction dynamics in Pb + Pb at the CERN/SPS: From partonic degrees of freedom to freeze-out. Progress in Particle and Nuclear Physics, 1999, 42, 313-322.	14.4	22
61	Center Domains and their Phenomenological Consequences. Physical Review Letters, 2013, 110, 202301.	7.8	22
62	Determination of Quark-Gluon-Plasma Parameters from a Global Bayesian Analysis. Nuclear Physics A, 2017, 967, 67-73.	1.5	22
63	Enhanced strange particle yields - signal of a phase of massless particles?. Journal of Physics G: Nuclear and Particle Physics, 2001, 27, 449-457.	3.6	21
64	Hadronization in heavy-ion collisions: recombination or fragmentation?. Journal of Physics G: Nuclear and Particle Physics, 2004, 30, S223-S228.	3.6	21
65	Enhanced antiproton production in Pb(160 A GeV)+Pb reactions: evidence for quark gluon matter?. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 485, 133-138.	4.1	18
66	Dynamics of the Landau-Pomeranchuk-Migdal effect in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV. Physical Review Letters, 2000, 85, 133-138.	4.1	18
67	Exploring ensemble visualization. Proceedings of SPIE, 2012, 8294, .	0.8	18
68	Medium-modified jets and initial state fluctuations as sources of charge correlations measured at energies available at the BNL Relativistic Heavy Ion Collider (RHIC). Physical Review C, 2011, 83, .	2.9	17
69	Shear viscosity in a perturbative quark-gluon plasma. Journal of Physics G: Nuclear and Particle Physics, 2011, 38, 015004.	3.6	16
70	Search for the production of strangelets in quark matter using particle correlations. Journal of Physics G: Nuclear and Particle Physics, 1997, 23, 2095-2105.	3.6	15
71	Nonthermal direct photons in Pb+Pb at 160A GeV from microscopic transport theory. Physical Review C, 1998, 57, 3271-3275.	2.9	13
72	RHIC physics with the parton cascade model. Journal of Physics G: Nuclear and Particle Physics, 2004, 30, S1283-S1286.	3.6	12

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73	Comparative visualization of ensembles using ensemble surface slicing. Proceedings of SPIE, 2012, 8294, .	0.8	12
74	Quarkonium production in heavy ion collisions: coupled Boltzmann transport equations. Nuclear Physics A, 2019, 982, 755-758.	1.5	12
75	Dissociation of J/psi by mesons: thermal versus nonequilibrium scenario. Journal of Physics G: Nuclear and Particle Physics, 1999, 25, 2351-2359.	3.6	11
76	The influence of initial state fluctuations on heavy quark energy loss in relativistic heavy-ion collisions. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 125104.	3.6	11
77	Characterization of the initial state and QGP medium from a combined Bayesian analysis of LHC data at 2.76 and 5.02 TeV. Nuclear Physics A, 2017, 967, 293-296.	1.5	11
78	Fluctuating fluid dynamics for the QGP in the LHC and BES era. EPJ Web of Conferences, 2018, 171, 16004.	0.3	11
79	Lattice gauge description of colliding nuclei. Journal of Physics G: Nuclear and Particle Physics, 1999, 25, L109-L115.	3.6	10
80	$\bar{\psi}$ -N correlations probe the nuclear equation of state in relativistic heavy-ion collisions. Physical Review C, 1995, 51, R12-R16.	2.9	9
81	Anomalous viscosity of an expanding quark-gluon plasma. Journal of Physics G: Nuclear and Particle Physics, 2007, 34, S839-S842.	3.6	9
82	Heavy-flavor observables at RHIC and LHC. Nuclear Physics A, 2014, 931, 575-580.	1.5	9
83	Heavy flavor dynamics in QGP and hadron gas. Nuclear Physics A, 2014, 931, 569-574.	1.5	9
84	Transverse energy dependence of neutron squeeze-out in relativistic heavy ion collisions. Zeitschrift für Physik A, 1995, 352, 171-174.	0.9	8
85	Strangeness production in microscopic transport models. Journal of Physics G: Nuclear and Particle Physics, 2002, 28, 1543-1551.	3.6	8
86	A data-driven analysis of the heavy quark transport coefficient. Nuclear Physics A, 2017, 967, 668-671.	1.5	8
87	Transition to resonance-rich matter in heavy-ion collisions at RHIC energies. Journal of Physics G: Nuclear and Particle Physics, 2001, 27, 421-426.	3.6	7
88	(Strange) meson interferometry at RHIC. Journal of Physics G: Nuclear and Particle Physics, 2002, 28, 1885-1893.	3.6	7
89	Particle correlations at RHIC – Scrutiny of a puzzle. Nuclear Physics A, 2003, 715, 801c-804c.	1.5	7
90	Anomalous transport processes in turbulent non-Abelian plasmas. Nuclear Physics A, 2011, 854, 76-80.	1.5	7

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91	Dynamical evolution, hadronization and angular de-correlation of heavy flavor in a hot and dense QCD medium. Nuclear Physics A, 2014, 932, 38-44.	1.5	7
92	K-factors in parton cascades at RHIC and SPS. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1999, 471, 108-112.	4.1	6
93	Probing hadronization with strangeness. Journal of Physics G: Nuclear and Particle Physics, 2001, 27, 635-644.	3.6	6
94	Recombination plus fragmentation model at RHIC: elliptic flow. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, S429-S435.	3.6	6
95	Review of Parton Recombination Models. Journal of Physics: Conference Series, 2006, 50, 279-288.	0.4	6
96	Extracting hadronic viscosity from microscopic transport models. European Physical Journal C, 2009, 62, 63-68.	3.9	6
97	Transport theoretical description of collisional energy loss in infinite quark-gluon matter. Journal of Physics G: Nuclear and Particle Physics, 2010, 37, 105112.	3.6	6
98	Flow in small and large quark-gluon plasma droplets: the role of nucleon substructure. Nuclear Physics A, 2017, 967, 361-364.	1.5	6
99	Traces of nonequilibrium effects, initial condition, bulk dynamics, and elementary collisions in the charm observables. Physical Review C, 2020, 101, .	2.9	6
100	The 3D hydro+UrQMD model with the QCD critical point. Journal of Physics G: Nuclear and Particle Physics, 2008, 35, 104099.	3.6	5
101	Implementing the LPM effect in a parton cascade model. Nuclear Physics A, 2011, 862-863, 275-278.	1.5	5
102	Increasing the perceptual salience of relationships in parallel coordinate plots. Proceedings of SPIE, 2012, 8294, 82940T.	0.8	5
103	Probing the QCD critical point with relativistic heavy-ion collisions. Open Physics, 2012, 10, .	1.7	5
104	Baryon number diffusion with critical fluctuations. Nuclear Physics A, 2017, 967, 824-827.	1.5	5
105	Bremsstrahlung from a microscopic model of relativistic heavy ion collisions. Physical Review C, 2000, 63, .	2.9	4
106	Perturbative dynamics of strangeness production at RHIC. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, S1005-S1010.	3.6	4
107	Photon Production in the Parton Cascade Model. Nuclear Physics A, 2007, 783, 367-378.	1.5	4
108	Systematic comparison of jet energy-loss schemes in a 3D hydrodynamic medium. Journal of Physics G: Nuclear and Particle Physics, 2008, 35, 104064.	3.6	4

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109	Jet modification in a brick of QGP matter. , 2012, , .		4
110	Heavy quark energy loss and thermalization in hot and dense nuclear matter. Journal of Physics: Conference Series, 2013, 420, 012022.	0.4	4
111	Estimating nucleon substructure properties in a unified model of p-Pb and Pb-Pb collisions. Nuclear Physics A, 2019, 982, 503-506.	1.5	4
112	Parton energy loss in a hard-soft factorized approach. Physical Review C, 2022, 105, .	2.9	4
113	Intermediate mass dileptons from secondary Drell-Yan processes. Nuclear Physics A, 1998, 638, 507c-510c.	1.5	3
114	Strangeness production at RHIC in the perturbative regime. Journal of Physics G: Nuclear and Particle Physics, 2004, 30, L7-L15.	3.6	3
115	RHIC Physics with the Parton Cascade Model. Acta Physica Hungarica A Heavy Ion Physics, 2005, 24, 45-50.	0.4	3
116	Space-time evolution of bulk QCD matter at RHIC. European Physical Journal C, 2007, 49, 97-102.	3.9	3
117	$\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll" \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mo stretchy="false" \rangle} \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ of a Relativistic Hadron Gas at RHIC: Approaching the AdS/CFT bound?. Nuclear Physics A, 2009, 830, 733c-736c.	1.5	3
118	What do we know about the viscosity of QCD matter?. Nuclear Physics A, 2011, 862-863, 174-179.	1.5	3
119	Heavy quark energy loss and angular de-correlation in a quark-gluon plasma matter. Journal of Physics: Conference Series, 2013, 446, 012035.	0.4	3
120	Parton rescattering and colour screening in Au+Au collisions at RHIC. Nuclear Physics A, 2003, 715, 813c-816c.	1.5	2
121	Transverse momentum distribution of net baryon number at RHIC. Journal of Physics G: Nuclear and Particle Physics, 2003, 29, L51-L58.	3.6	2
122	Correlations in the Parton Recombination Model. Nuclear Physics A, 2006, 774, 635-638.	1.5	2
123	SQM 2006: theory summary and perspectives. Journal of Physics G: Nuclear and Particle Physics, 2006, 32, S15-S27.	3.6	2
124	Hard and soft probeâ€™medium interactions in a 3D hydro+micro approach at RHIC. Journal of Physics G: Nuclear and Particle Physics, 2007, 34, S979-S983.	3.6	2
125	Hadronization via recombination. Journal of Physics G: Nuclear and Particle Physics, 2009, 36, 064034.	3.6	2
126	Revealing the collision energy dependence of $\hat{\Gamma} / s$ in RHIC-BES Au+Au collisions using Bayesian statistics. Nuclear Physics A, 2017, 967, 784-787.	1.5	2

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127	Effective viscosities in a hydrodynamically expanding boost-invariant QCD plasma. <i>Physical Review C</i> , 2020, 102, .	2.9	2
128	Nucleon and baryon densities in heavy ion collisions at 1 GeV/nucleon. <i>Zeitschrift für Physik A</i> , 1995, 351, 359-360.	0.9	1
129	Current Status of Quark and Gluon Plasma Signals. <i>Acta Physica Hungarica A Heavy Ion Physics</i> , 2001, 14, 425-438.	0.4	1
130	Anti- $\Omega$ dominance in pp interactions at intermediate energies. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2002, 28, 1965-1969.	3.6	1
131	Charge fluctuation observables at RHIC. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2004, 30, S243-S249.	3.6	1
132	What do we learn from strangeness at RHIC?. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2005, 31, S733-S740.	3.6	1
133	The flavours of the quark-gluon plasma. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2006, 32, S411-S419.	3.6	1
134	MODELING OF HEAVY-ION COLLISIONS AT THE RELATIVISTIC HEAVY-ION COLLIDER. <i>International Journal of Modern Physics E</i> , 2007, 16, 729-741.	1.0	1
135	Signals of the QCD Critical Point in Hydrodynamic Evolutions. <i>Nuclear Physics A</i> , 2009, 830, 291c-294c.	1.5	1
136	The freeze-out properties of hyperons in a microscopic transport model. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2010, 37, 045002.	3.6	1
137	Systematic Monte-Carlo studies of dijets at RHIC using the VNI/BMS Parton Cascade. <i>Nuclear Physics A</i> , 2013, 904-905, 759c-762c.	1.5	1
138	Suppression and Two-Particle Correlations of Heavy Mesons in Heavy-Ion Collisions. <i>Nuclear Physics A</i> , 2016, 956, 505-508.	1.5	1
139	A data-driven analysis for heavy quark diffusion coefficient. <i>EPJ Web of Conferences</i> , 2018, 171, 18001.	0.3	1
140	Transverse Pressure in Relativistic Nuclear Collisions: Evidence for Partonic Interactions?. <i>Acta Physica Hungarica A Heavy Ion Physics</i> , 2005, 24, 181-188.	0.4	0
141	Hadronization at RHIC: Interplay of Recombination and Fragmentation. <i>Acta Physica Hungarica A Heavy Ion Physics</i> , 2005, 24, 227-233.	0.4	0
142	Transport Theory for RHIC. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	0
143	High Energy-Density QCD Matter. <i>Progress of Theoretical Physics Supplement</i> , 2012, 193, 53-61.	0.1	0
144	Triangular flow in relativistic heavy ion collisions in an event-by-event hybrid approach. , 2012, , .		0

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145	Focus section on AdS/CFT applications to QCD matter. Journal of Physics G: Nuclear and Particle Physics, 2012, 39, 050301.	3.6	0
146	Center domains and their phenomenological consequences in ultrarelativistic heavy ion collisions. Nuclear Physics A, 2014, 931, 1120-1124.	1.5	0
147	Effect of quark gluon plasma on charm quark produced in relativistic heavy ion collision. Journal of Physics: Conference Series, 2014, 509, 012038.	0.4	0